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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/670,792      | 09/26/2003  | Kazuhiko Nagano      | Q77647              | 4366             |

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EXAMINER

VANNUCCI, JAMES

ART UNIT PAPER NUMBER

2828

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/670,792

Applicant(s)

NAGANO ET AL.

Examiner

Jim Vannucci

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9-26-03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Lang et al.(6,240,116).

Claim 1, figure 5 discloses a stepped shape block(66) formed with a plurality of mount portions which have different heights and are arranged a first direction(across the page) parallel to an optical axis in order of height, a plurality of sets of a collimator-lens array(28) and a plurality laser diodes(22) where the collimator-lens array in each of the plurality of sets is constituted by a plurality of collimator lenses which are arranged along a second direction(up and down) and collimate laser beams emitted from the plurality of laser diodes in each of the plurality sets, and where the plurality of laser diodes(22) and collimator-lens array(28) in each of the plurality of sets are fixed to one of the plurality of mount portions so that light-emission points of the plurality of laser diodes in each of the plurality of sets are aligned in a third direction(direction of diagonal formed by points of the first, second, third, etc. diode; respectively, in each of the three sets).

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Claim 2, figure 6 discloses the bottom surface of the collimator-lens array(114) in each of a plurality of sets being fixed to an upper surface of one of the mount portions(104) so that the collimator-lens array is supported by the upper surface of one of the plurality of mount portions.

Claims 3-4, figures 5 and 6 disclose the plurality of laser diodes in each of the plurality of sets being fixed to a surface of one of the plurality of mount portions, and reference marks(grooves) which indicate fixation positions of the plurality of laser diodes are arranged on the surface of one of the plurality of mount portions is also disclosed(col. 1, lines 44-48).

Claims 5-8, figure 10 discloses a multi-cavity laser diode chip to be used in each of the plurality of sets that has light-emission points.

Claims 9-10, figure 9 discloses a single cavity laser diode to be used in each of the plurality of sets that has a single light emission point.

Claims 11-12, the block disclosed in figure 6 is formed by combining plurality of planar plates(104) which are stacked in the direction.

Claim 13-14, the plurality of planar plates(104) disclosed in figure 6 are arranged in correspondence with steps(102) constituting the stepped shape.

### ***Correspondence***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Vannucci whose phone number is (571) 272-1820.

Any inquiry of a general nature or relating to the status of this application

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should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (571) 273-8300.



James Vannucci